

CLAIMS

1. A security unit comprising a secure, lockable housing including an inlet (16) for items to be stored, a gas feed mechanism (8) for conveying items introduced into the inlet (16) of the housing, and a removable package (7) provided within the housing, the removable package (7) including an inlet (62) through which items conveyed by the gas feed mechanism (8) are introduced into the removable package (7) and a gas outlet (62) through which gas entering the removable package (7) to convey the items to be stored can escape from the package (7), the unit being arranged so that the inlet (62) of the removable package (7) is sealed in a tamper evident manner before the removable package (7) can be removed from the housing.
2. A security unit according to Claim 1, in which the removable package (7) is formed of a plastics material.
3. A security unit according to Claim 2, further including a heat seal system (11,12) for heat sealing the removable package (7).
4. A security unit according to any one of the preceding claims, further comprising a means to detect the sealing of the removable package before allowing access to the removable package.
5. A security unit according to Claim 4 when dependent upon Claim 3, in which the means to detect the sealing of the removable package includes a means to detect current flow through the heat seal unit.
6. A security unit according to any one of the preceding claims, further comprising a lock (14) having a delay such that the access to the interior of the housing, and in particular to the removable package (7), is prevented for a predetermined period after an attempt is made to open the case.

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7. A security unit according to Claim 6 when dependent upon Claim 3 or any Claim dependent thereon, in which the heat seal unit (11,12) is activated in response to the attempt to open the housing.

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5 8. A security unit according to any one of the preceding claims, further comprising a sensor associated with the sealing mechanism to verify that there are no items in the position where the removable package is to be sealed.

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10 9. A security unit according to any one of the preceding claims, further comprising an identification and/or validation means (5) between the inlet of the housing and the removable package (7) for identifying and/or validating items which are introduced to the removable package (7).

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10. A security unit according to Claim 9, in which the identification and/or validation of the items is stored in a memory.

15 11. A security unit according to Claim 10, in which the removable package (7) is identifiable, and can be associated with the stored identification and/or validation of the items stored in the memory.

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20 12. A security unit according to any one of the preceding Claims, in which a sensor (43) detects the presence and/or the correct fitting of a removable package (7), and prevents the use of the unit unless a removable package (7) is present and/or fitted correctly.

25 13. A gas feed conveying system for use in a secure unit according to any one of the preceding claims, the gas feed conveying system comprising a channel (8) through which items are to be conveyed and a pair of gas inlets provided on opposed sides of the channel (8) inclined at an angle to that in which the items are to be conveyed, and through which gas from outside the

channel (8) is jetted to produce a gas flow through the channel (8) which entrains an item to convey this through the channel.

14. A gas feed conveying system according to claim 13, in which the gas is air.

15. A gas feed conveying system according to any one of Claims 13 or 14, in which the channel (8) has a generally oval cross-sectional channel in a plane generally normal to that along which the items are conveyed.

16. A gas feed conveying system according to any one of Claims 13 to 15, in which the inlets are formed at an angle of about 45° to the direction in which items are conveyed through the channel (8).

17. A gas feed conveying system according to any one of Claims 13 to 16, in which the inlets are provided at the entrance of the channel (8), and are arranged such that the gas flows from the inlets converge towards the longitudinal central plane of the channel (8).

18. A gas feed conveying system according to any one of Claims 13 to 16, in which the inlets are formed by providing a hole through a dimple formed in the surface of the channel.

19. A gas feed conveying system according to any one of Claims 13 to 16, in which the inlets comprise elongate slots extending substantially across the width of the channel.

20. A gas feed conveying system according to any one of Claims 13 to 19, in which the channel is formed of sheet material, such as metal, and in which the inlets are formed in the flat sheet which is then bent to form the channel.

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21. A gas feed conveying system according to any one of Claims 13 to 19, in which the channel is formed from a plastics material.

22. A gas feed system according to any one of Claims 13 to 21, in which sensors are provided to detect the movement of items through the channel, and control means are provided to control the flow of gas through the inlets dependent upon the detection of movement of items through the channel.

23. A secure unit according to any one of Claims 1 to 12, comprising the gas feed conveying system of any one of Claims 13 to 22.

24. A package for use in the secure unit according to any one of Claims 1 to 12 or Claim 23, the package comprising a plastics container having an inlet opening for receiving items to be collected, a neck portion extending from the inlet opening, and a number of gas outlets remote from the inlet opening through which gas introduced into the inlet is vented.

25. A package according to Claim 24 formed from a plastic material.

26. A package according to Claim 24 or Claim 25, including fluid outlet holes provided in the wall of the package towards the upper part of the package remote from the inlet to the package.